Amendments to the Drawings:

The drawings for this application are contained in Appendix A. They include an additional drawing (Figure 3) and the required changes as delineated in the informal rejection .

REMARKS/ARGUMENTS

The original patent application has been modified consistent with the requirements of 37 CFR 1.121 and the examiners rationale for rejection. In addition, rebuttal comments are detailed below in response to the unacceptable portions of the original submission.

SUMMARY

The conflicts that exist between the referenced patents and our patent application as presently written have been correctly detailed. It is our belief, however, that our proposed application is uniquely different from the cited patents.

We will clarify the intended rationale of our application and rewrite the submission to better describe this rationale to cancel these conflicts. In addition, the submission will be redesigned to emphasize the specific application as a microscope illumination source.

APPROACH

First, the intent of the proposed invention will be explicitly described.

Second, the rationale(s) for suggesting that there are no conflicts with the cited patents will be detailed.

1. Intent

The salient feature of our device is the capture of the unused radiated power from any conventional omni directional light source (e.g., a light bulb or an arc lamp) and the subsequent redirection of this energy to intensify the illumination of an object under microscopic analysis. To accomplish this goal, the radiator is enshrouded by an array of optical fibers configured to efficiently receive the 3-dimensional emanations of a centrally located radiator.

Present omni directional illumination systems for microscopes channel that portion of the forward radiation pattern that impinges on the input of the microscope's illumination port. This prime input is supplemented with additional light energy by redirecting a portion of the rearward emanation with a reflector assembly.

It is the intent of our proposed system to gather a major portion of the unused radiated light energy that is not captured by the directly intercepted and reflected portions of the omni directional radiation pattern. Our fiber optic array has been designed to intercept a larger portion of the spherical radiation pattern than the existing light systems. There is no constraint on the type of point-source radiator being used and the radiator is amenable to easy replacement.

2. Conflict Analysis

Patents 4,444,459,3,934,148, and 5,558,422 are all concerned with the ability of devices to redirect the radiation pattern of a radiated light source for the purpose of either data transference or decorative enhancements.

Patent 5,878,070 describes a semiconductor lasing structure that utilizes a closely fitted wave-guide to capture the edge-radiated energy from a lasing disc.

1. None of these devices utilize the circular fiber optic array to capture radiated light energy; rather they all use the array(s) to inwardly radiate energy from the array to be passively distributed.

2. None of these devices is primarily concerned with enhancing the efficient power transfer of light energy from a family of omni directional radiators.

3. All of the referenced patents describe systems that are sensitive to electromagnetic radiation primarily in the horizontal plane; no attempt is made to capture and utilize any spherically radiated energy from a centrally located independent point light source.

DETAILS

WOODWELL (4,444,459)

As stated, this is an optical slip ring. The object of this invention is the transference of optical data between two concentric objects that can be rotationally displaced relative to each other. This function is analogous to a conventional rotor/stator rotating system wherein communication (commutating) is required between two concentric cylinders that

experience a relative rotational displacement. The system described has uniquely accomplished this goal with a non-contact optical interface arrangement.

Efficient power transfer is not the aim of this patent; data transfer from the fixed "outside world" to a rotating receiver is the goal. An electrical input modulates a light source, which excites a circular fiber optic array (the stator) that is received by the internal rotor and reconverted to an electrical analog of the input. Once the optical interface (stator-to-rotor) has been broached, the data is demodulated into an electrical analog for subsequent signal processing.

The light source in this patent should not be, and, is not, an omni directional radiator. For maximum power transfer, the modulated light source should be tightly coupled to the input face of the fiber optic cable where it is subsequently allowed to radiate inward to the receiver location. An omni directional radiator would inefficiently radiate the bulk of its energy away from the fiber optic input.

In our system:
An omni directional radiator is positioned at the center of the fiber optic array and radiates from this point outward in all directions. The vertical profile of the enshrouding array serves to capture a large percentage of the energy that is radiated upward and out of the horizontal plane. There is no power enhancement of the power of the prime light source of the Woodwell system; data transfer is the prime goal.

There is no rotational displacement of the radiating or receiving elements of our device.

There is no data modulation and/or subsequent detection of any such data. Our intent is to increase the light-gathering efficiency of an unmodulated light source for the purpose of more effectively illuminating a microscope specimen. .

COLLINS (3,934,148)

This invention is concerned with the redirection of light energy. There is no power gain of the original light source. No attempt is made to capture the omni directionally radiated light from the fluorescent tubular radiator.

SANFORD (5,558,422)

This invention is solely for the purpose of redirecting the available light energy for decorative purposes. It amounts to a lossy redistribution of a singular light source into a myriad of destinations.

SENG-TIONG HO, ZHANG (5,878,070)

This invention is about a structure for the development of a laser-type device. It does not relate to the use of an incoherent light source to be used for the purpose of illuminating

an object to enhance its view ability. It is not applicable to improving the light output from a family of structurally independent omni directional radiators.

Applicant respectfully hopes that a sufficient case has been established to warrant the acceptance of this application as amended and that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

Bernard Petrillo
Customer No. 28206

APPENDIX A

This appendix contains the following drawings:

1. Figure 1 – Top and side views of assembly

2. Figure 2 – Relative motion between radiator and shroud

3. Figure 3 – Block diagram of vertical drive servo

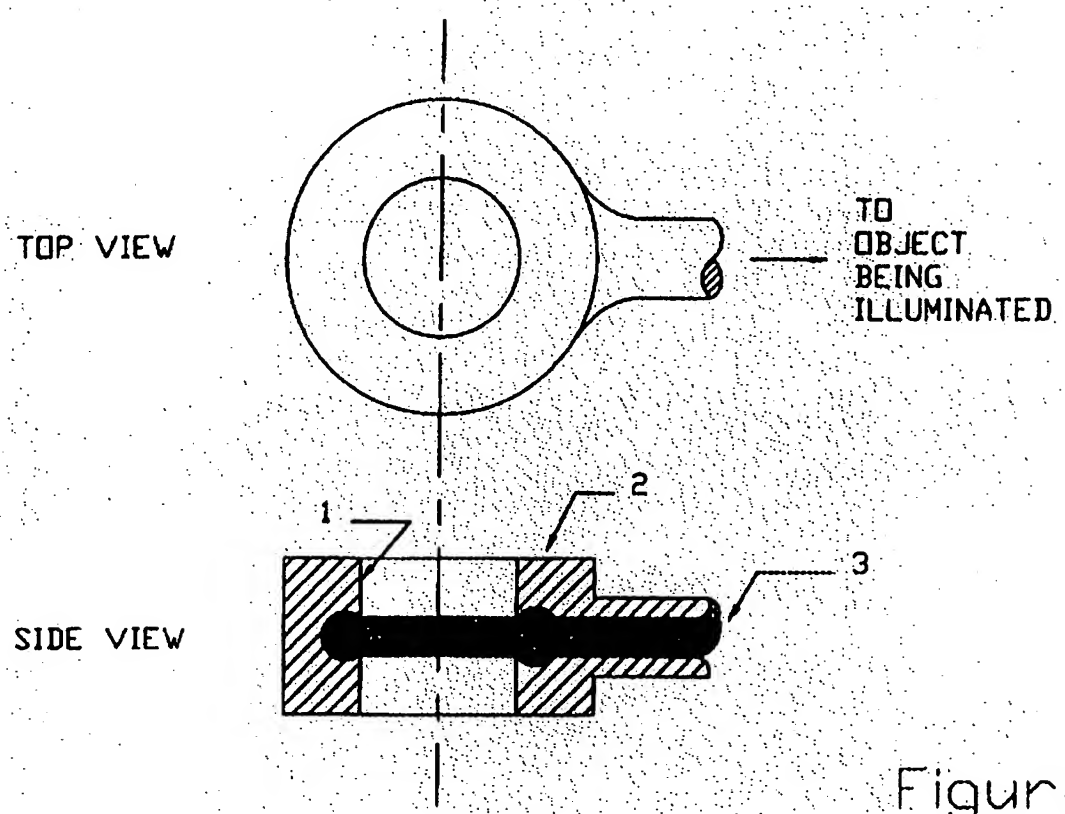

Figure 1

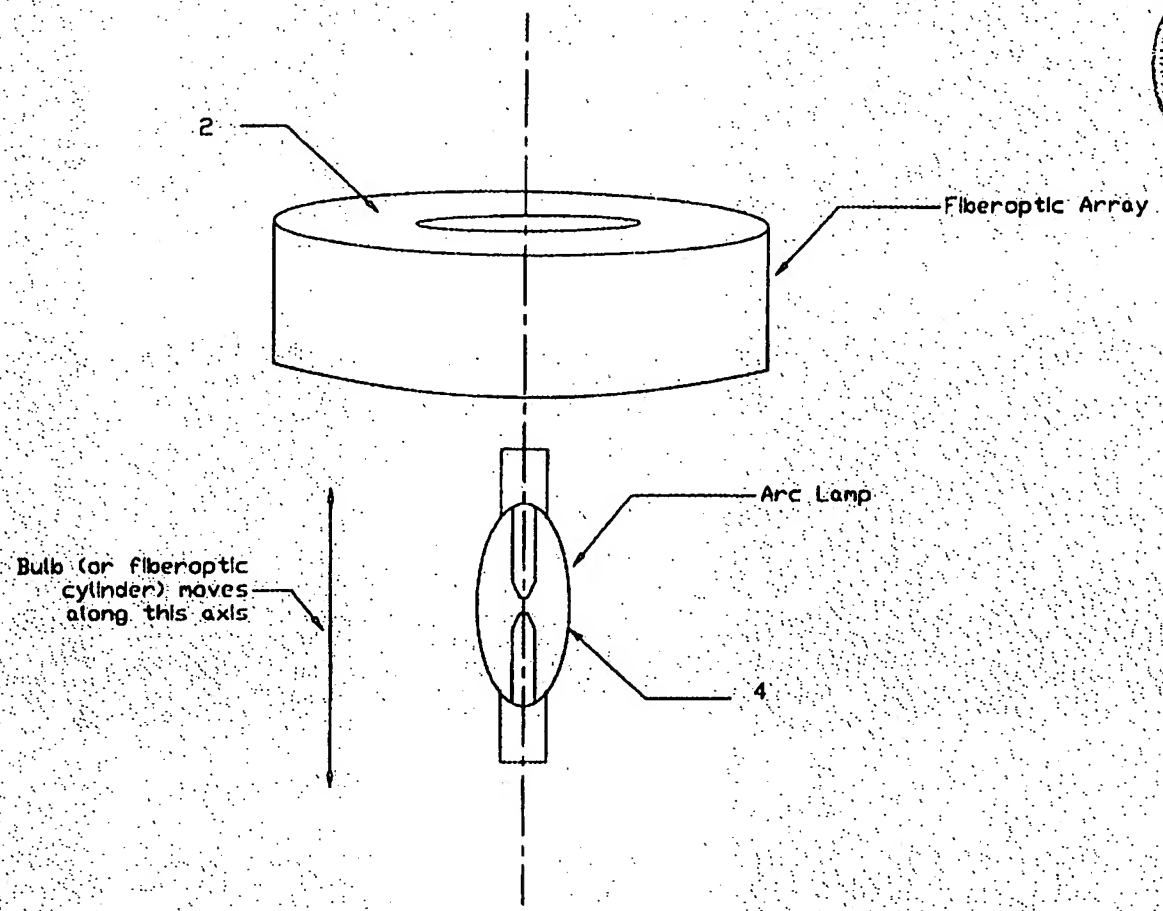

Figure 2

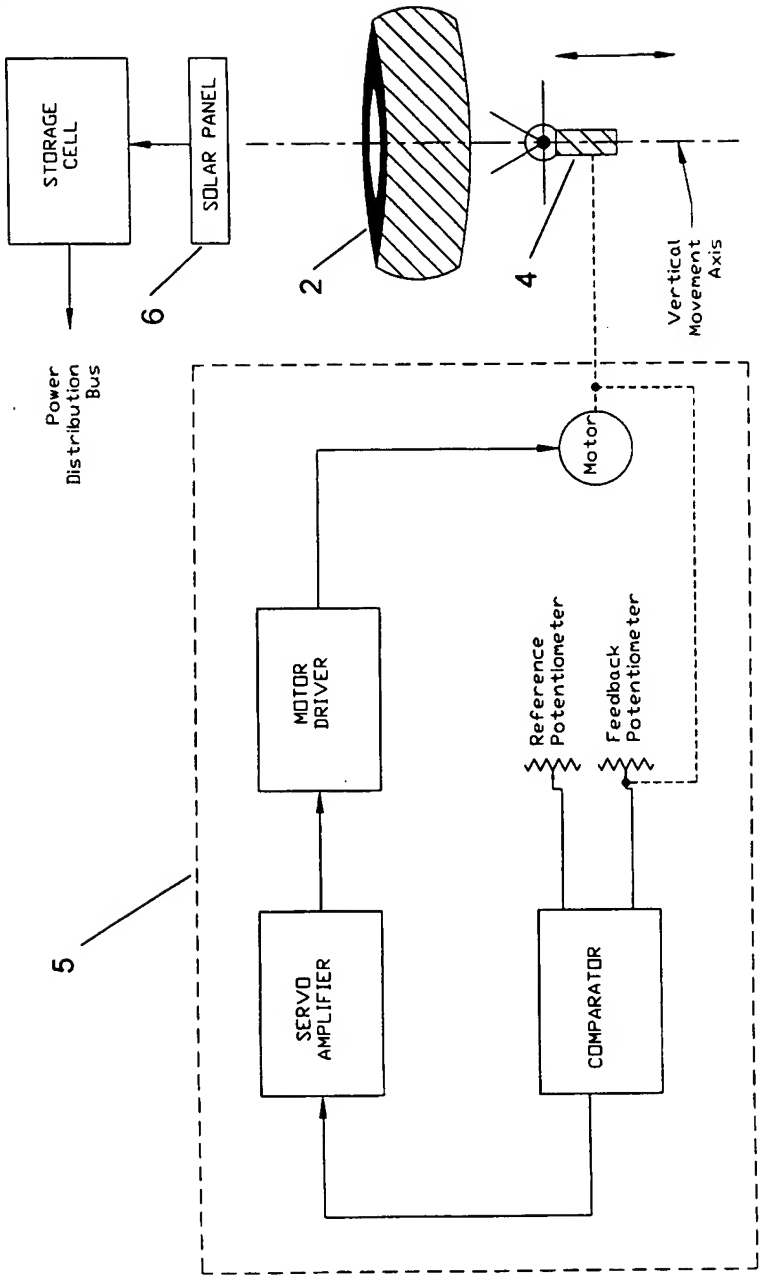

Figure 3

Thursday, January 15, 2004

From: RHODES INSTRUMENT CORP.
11 VIRGINIA ROAD
N. WHITE PLAINS, NY 10603

To: COMMISSIONER OF PATENTS
P. O. BOX 1450
ALEXANDRIA, VA 22313-1450

Re: Application No. 10/065/945 (Confirmation No. 8367)

The following documents are being submitted in response to the "Notice of Non-Compliant Amendment dated 12/20/03.

Sincerely,

Bernard Petrillo
Rhodes Instrument Corp.

Image

2875

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
10/065,945	11/26/2002	Bernard Petrillo		8367

28206 7590 12/20/2003

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EXAMINER	
SEMBER, THOMAS M	

ART UNIT	PAPER NUMBER
2875	

DATE MAILED: 12/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE
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www.uspto.gov

Paper No.

Notice of Non-Compliant Amendment (37 CFR 1.121)

The amendment document filed on 12/3/03 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121, as amended on June 30, 2003 (see *68 Fed. Reg. 38611*, Jun. 30, 2003). In order for the amendment document to be compliant, correction of the following omission(s) or provision is required. **Only the section (1.121(h)) of the amendment document containing the omission or non-compliant provision must be resubmitted (in its entirety), e.g., the entire "Amendments to the claims" section of applicant's amendment document must be re-submitted.**

THE FOLLOWING CHECKED (X) ELEMENTS(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

☒ 1. Amendments to the specification:
- ☒ A. Amended paragraph(s) do not include markings.
- ☐ B. New paragraph(s) should not be underlined.
- ☒ C. Other Please Show Changes to the Spec. (underlining, double brackets and cross-through)

☐ 2. Abstract:
- ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
- ☐ B. Other _____

☐ 3. Amendments to the drawings: _____

☒ 4. Amendments to the claims:
- ☐ A. A complete listing of all of the claims is not present.
- ☐ B. The listing of claims does not include the text of all claims (incl. withdrawn claims)
- ☐ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified.
- ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
- ☒ E. Other: Claims need to begin on a separate Sheet from the Spec.

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP Sec. 714 and the USPTO website at http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/officeflyer.pdf.

If the non-compliant amendment is a **PRELIMINARY AMENDMENT,** applicant is given ONE MONTH from the mail date of this letter to supply the corrected section which complies with 37 CFR 1.121. Failure to comply with 37 CFR 1.121 will result in non-entry of the preliminary amendment and examination on the merits will commence without consideration of the proposed changes in the preliminary amendment(s). This notice is not an action under 35 U.S.C. 132, and **this ONE MONTH time limit is not extendable.**

If the non-compliant amendment is a reply to a **NON-FINAL OFFICE ACTION,** and since the amendment appears to be a *bona fide* attempt to be a reply (37 CFR 1.135(c)), applicant is given a TIME PERIOD of ONE MONTH from the mailing of this notice within which to re-submit the corrected section which complies with 37 CFR 1.121 in order to avoid abandonment. **EXTENSIONS OF THIS TIME PERIOD ARE AVAILABLE UNDER 37 CFR 1.136(a).**

If the amendment is a reply to a **FINAL REJECTION,** this form may be an attachment to an Advisory Action. **The period for response to a final rejection continues to run from the date set in the final rejection**, and is not affected by the non-compliant status of the amendment.

Sandra Pitts
Legal Instruments Examiner (LIE)

July 22, 2003 (rev.)